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ABSTRACT

This booklet outlines 18 national standards for pediatric immunizations. The standards were developed by a 35-member working group drawn from 24 different public and private sector organizations and from numerous state and local health departments and approved by the U.S. Public Health Service. The first three standards state that: immunization services should be readily available; there should be no barriers or unnecessary prerequisites to the receipt of vaccines; immunization services should be available free or for a minimal fee. Standards 4-18 also state that providers should: (1) use all clinical encounters to screen and, when indicated, immunize children; (2) educate parents and guardians about immunization in general terms; (3) question parents or guardians about contraindications and before immunization, inform them of the risks and benefits of specific immunizations; (4) follow only true contraindications; (5) administer simultaneously all vaccine doses for which a child is eligible at the time of each visit; (6) use accurate and complete recording procedures; (7) co-schedule immunization appointments in conjunction with appointments for other child health services; (8) report adverse events following immunization promptly; (9) operate a tracking system; (10) adhere to appropriate procedures for vaccine management; (11) conduct semiannual audits to assess immunization coverage levels; (12) maintain up-to-date, easily retrievable medical protocols; (13) operate with patient-oriented and community-based approaches; (14) have vaccines administered by properly trained individuals; and (15) receive ongoing education and training on current immunization recommendations. A guide that lists contraindications and precautions to the administration of several vaccines is appended. (MDM)

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Standards for Pediatric Immunization Practices

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Recommended by the
National Vaccine Advisory Committee
April 1992

Approved by the
United States Public Health Service
May 1992

Endorsed by the
American Academy of Pediatrics
May 1992

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Other organizations that have endorsed
The Standards for Pediatric Immunization Practices

(as of January 1993)

Advisory Committee on Immunization Practices

American Nurses Association

Association of Maternal and Child Health Programs

Conference of State and Territorial Epidemiologists

National Association of Children's Hospitals and Related Institutions

National Association of Pediatric Nurse Associates and Practitioners

National Perinatal Association

The Arc (formerly Association of Retarded Citizens)

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The Standards represent the consensus of the National Vaccine Advisory Committee (NVAC) and of a broad group of medical and public health experts about what constitute the most desirable immunization practices. It is recognized by the NVAC that not all of the current immunization practices of public and private providers are in compliance with the Standards. Nevertheless, the Standards are expected to be useful as a means of helping providers to identify needed changes, to obtain resources if necessary, and to actually implement the desirable immunization practices in the future.

Preface

The National Vaccine Advisory Committee's recommended **Standards for Pediatric Immunization Practices** were developed by a 35 member working group drawn from 24 different public and private sector organizations and from numerous state and local health departments (see page 31) and approved by the U.S. Public Health Service. These national Standards are recommended for use by all health professionals providing care in public or private health care settings who are involved in the administration of vaccines or the management of immunization services for children. Some of the Standards may also be relevant when administering vaccines to adults.

One of the most important national health objectives identified by the U.S. Public Health Service for the year 2000 is to immunize 90% of preschool children by their second birthday against diphtheria, tetanus, pertussis, poliomyelitis, measles, mumps, rubella, Haemophilus influenzae type b and Hepatitis B. Although great progress was made during the 1980's to achieve immunization of school-aged children, efforts for preschool-aged children have lagged behind. Available data suggest that less than 60% of children are up-to-date for the recommended primary immunization series by their second birthday.

Current health care practices fail to deliver vaccine on schedule to a large proportion of our vulnerable preschool-aged children. This failure is due in significant part to barriers that impede vaccine delivery and to missed opportunities to vaccinate. The resultant low immunization coverage rates among young children, especially in our inner cities, are reflected in the resurgence of measles in recent years in preschool-aged children.

Examples of barriers to vaccine delivery include: policies that require advance appointments for immunizations when there are long delays for such appointments and long waiting times; policies that require comprehensive physical examinations as a prerequisite, even though appointments for such examinations must be scheduled weeks or months in advance; and artificially imposed limitations on the number of individuals who may enroll for immunization services at a specific location on any given day. In effect, our system is not "user-friendly".

Clinical practices which lead to failure to take advantage of all opportunities to vaccinate result in missed opportunities. Providers often fail to screen and appropriately vaccinate children who are presented for other medical services or who are accompanying other family members. And, providers often fail to take advantage of the opportunity to administer simultaneously all doses of vaccines for which a child is eligible on a particular visit. This failure may be due to lack of knowledge about true contraindications (e.g., erroneously considering mild illnesses a contraindication) or, about the effectiveness and safety of simultaneous administration of multiple vaccines. Additionally, clinic or office hours are often inadequate to meet the demand for immunization services.

Ideally, immunizations should be given as part of comprehensive child health care. Although immunization services are best delivered within this context, strengthening our national health care system will take time. The Nation's children cannot afford to wait. What we can do for them today is to raise preschool immunization coverage levels and control vaccine-preventable disease outbreaks through immediate change in our immunization policies and practices.

By adopting these **Standards**, providers can begin to enhance and change their own policies and practices. It is recognized that not all providers will have the funds necessary to fully implement the **Standards** immediately. Nevertheless, those providers and programs lacking the resources to implement the **Standards** fully should find them a useful tool in better delineating immunization needs and in obtaining additional resources in the future.

Recources for full implementation of these **Standards** is one of many complex issues which are not addressed in the **Standards**. These issues, among many others, include vaccine supply, computer needs, the complexity of the recommended schedule, vaccine costs, adult immunization, and provider education. While these issues are of such complexity and scope that discussion is not possible within the **Standards**, efforts are currently underway to resolve them in ways which will support the **Standards** and the achievement of the year 2000 objectives.

Preamble

Ideally, immunizations should be given as part of comprehensive child health care. This is the ultimate goal toward which the nation must strive if all of America's children are to benefit from the best primary disease prevention our health care system has to offer.

Overall improvement in our primary care delivery system requires intensive effort and will take time. However, we should not wait for changes in this system before providing immunizations more effectively to our children. Current health care policies and practices in all settings result in the failure to deliver vaccines on schedule to many of our vulnerable preschool-aged children. This failure is due primarily to barriers that impede vaccine delivery and to missed opportunities during clinic visits. Changes in policies and practices can immediately improve coverage. The present system should be geared to "user-friendly," family-centered, culturally sensitive, and comprehensive primary health care that can provide rapid, efficient, and consumer-oriented services to the users, i.e., children and their parents. The failure to do so is evidenced by the recent resurgence of measles and measles-related childhood mortality, which may be an omen of other vaccine-preventable disease outbreaks.

Present childhood immunization practices must be changed if we wish to protect the nation's children and immunize 90% of two-year-olds by the year 2000.

The following standards for pediatric immunization practices address these issues. These standards are recommended for use by **all** health professionals in the public and private sector who administer vaccines to or manage immunization services for infants and children. These

Standards represent the most desirable immunization practices which health care providers should strive to achieve to the extent possible. By adopting these **Standards**, providers can begin to enhance and change their own policies and practices. It is recognized that not all providers will have the funds necessary to fully implement the **Standards** immediately. Nevertheless, those providers and programs lacking the resources to implement the **Standards** fully should find them a useful tool in better delineating immunization needs and in obtaining additional resources in the future in order to achieve the Healthy People 2000 immunization objective.

Standards

Standard 1. Immunization services are **readily available**.

Standard 2. There are **no barriers** or **unnecessary prerequisites** to the receipt of vaccines.

Standard 3. Immunization services are available **free** or for a minimal fee.

Standard 4. Providers utilize all clinical encounters to **screen** and, when indicated, **immunize** children.

Standard 5. Providers **educate** parents and guardians about immunization in general terms.

Standard 6. Providers **question** parents or guardians about **contraindications** and, before immunizing a child, **inform** them in specific terms about the risks and benefits of the immunizations their child is to receive.

Standard 7. Providers follow only true **contraindications**.

Standard 8. Providers administer **simultaneously** all vaccine doses for which a child is eligible at the time of each visit.

Standard 9. Providers use accurate and complete **recording procedures**.

Standard 10. Providers **co-schedule** immunization appointments in conjunction with appointments for other child health services.

Standard 11. Providers **report adverse events** following immunization promptly, accurately and completely.

Standard 12. Providers operate a **tracking system**.

Standard 13. Providers adhere to appropriate procedures for **vaccine management**.

Standard 14. Providers conduct semi-annual **audits** to assess immunization coverage levels and to review immunization records in the patient populations they serve.

Standard 15. Providers maintain up-to-date, easily retrievable **medical protocols** at all locations where vaccines are administered.

Standard 16. Providers operate with **patient-oriented** and **community-based** approaches.

Standard 17. Vaccines are administered by **properly trained** individuals.

Standard 18. Providers receive **ongoing education** and **training** on current immunization recommendations.

Discussion

1 Immunization services are readily available.

Immunization services should be responsive to the needs of patients. For example, in large urban areas, public immunization clinic services should be available daily, 8 hours per day. In smaller cities and rural areas, clinics may operate less frequently. To be fully responsive, providers in many locations should consider offering immunization services each working day as well as during some off-hours (e.g., weekends, evenings, early mornings, or lunch-hours). Immunization services should be considered for all days and at all hours that other child health services in the same site are offered (e.g., Special Supplemental Food Program for Women, Infants, and Children, [WIC]). Private providers who offer primary care to infants and children should always include immunization services as a routine part of that care.

Ready availability of immunization services also requires that the supply of vaccines be adequate at all times.

2 There are no barriers or unnecessary prerequisites to the receipt of vaccines.

Appointment-only systems often serve as barriers to immunization in both public and private settings. Thus, immunization services should also be available on a walk-in basis at all times for both routine and new enrollee visits. Waiting time should be minimized and generally not exceed 30 minutes. Furthermore, administration of needed vaccines should not be contingent on enrollment in a well-baby program unless enrollment is immediately available. Children presenting only for immunizations should be rapidly and efficiently screened without requiring other comprehensive health services. However, children receiving immunizations in such an "express lane" fashion and found not to have a primary care provider should be referred to one.

Physical examinations and temperature measurements prior to immunization should not be required if they delay or impede the timely receipt of immunizations (e.g., appointments for physical examination in some facilities may take weeks to months). A reliable decision to vaccinate can be based exclusively on the information elicited from a parent or guardian and on the provider's observations and judgment about the child's wellness at the time of vaccination. At a minimum, children should have pre-immunization assessments, including (a) observing the child's general state of health, (b) asking the parent or guardian if the child is well, and (c) questioning the parent or guardian about potential contraindications (see table, page 25).

In public clinic settings, the administration of vaccines should not be dependent on individual written orders or on a referral from a primary care provider. Rather, standing orders should be developed and implemented.

Immunization services are available free or for a minimal fee.

In the public sector, immunizations should be free of charge. If fees must be collected, they should be kept to a minimum. In the private sector, charges should include the cost of the vaccine, and a reasonable administration fee. Affordable vaccinations will limit the fragmentation of care and help assure the immunization of the greatest number of children. Public and private providers charging a fee to administer vaccines obtained through a consolidated federal contract should prominently display a state approved sign indicating that no one will be denied immunization services because of inability to pay the fee.

4 Providers utilize all clinical encounters to screen for needed vaccines and, when indicated, immunize children.

Each encounter with a health care provider, including an emergency room visit or hospitalization, is an opportunity to screen the immunization status and, if indicated, administer needed vaccines. Before discharge from the hospital, children should receive immunizations for which they are eligible by age and/or health status. The child's regular health care provider should be informed about the immunizations administered. Implementation of this standard minimizes the number of missed opportunities to vaccinate.

In addition, children accompanying parents or siblings who are seeking any service should also be screened and, when indicated, given needed vaccines.

Providers in subspecialty clinics (e.g., oncology) who care for children should pay particular attention to the immunization status of their patients and vaccinate or refer them to immunization services or primary health care providers as appropriate.

Providers in other specialties should also note the immunization status of children and refer or immunize as appropriate.

5 Providers educate parents and guardians about immunization in general terms.

Providers should educate parents and guardians in a culturally sensitive way, preferably in their own language, about the importance of immunizations, the diseases they prevent, the recommended immunization schedules, the need to receive immunizations at recommended ages and the importance of bringing their child's immunization record to each visit. Parents should be encouraged to take responsibility for ensuring that their child completes the full series. Providers should answer all questions parents and guardians may have and provide appropriate educational materials at suitable reading levels in pertinent languages.

6 Providers question parents or guardians about contraindications and, before immunizing a child, inform them in specific terms about the risks and benefits of the immunizations their child is to receive.

Minimal acceptable screening procedures for precautions and contraindications include asking questions to elicit a possible history of adverse events following prior immunizations and determining any existing precautions or contraindications (see table, page 25).

The Vaccine Information Pamphlets (required by regulation[1] to be used universally beginning April 15, 1992 for Measles, Mumps, Rubella, Diphtheria, Tetanus, Pertussis and Polio by all providers administering vaccine purchased from the federal contract) should be provided and reviewed with parents or guardians. Private physicians who purchase their own vaccines must use these pamphlets or must develop and use alternative vaccine information materials that meet all the requirements of the law. Similar information contained in the Important Information Statements for other vaccines (e.g., hepatitis B and *Haemophilus influenzae* type b) should be provided to all parents or guardians in public clinics and use of these statements should be considered by private providers. Providers should ensure that information materials are current and available in appropriate languages. Providers should ask parents or guardians if they have questions about what they have read and should ensure that they receive satisfactory answers to their questions.

Providers should explain where and how to obtain medical care during day- and night-time hours in case of an adverse event following vaccination.

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[1] Federal Register 1991;56(199):51798-51818, Codified at 42 Code of Federal Regulations Part 110

Providers follow only true <u>contraindications.</u>

Accepting conditions which are not true contraindications as being true contraindications (see table, page 25) often results in the needless deferment of indicated immunizations. The table of true contraindications is based on the recommendations of the Advisory Committee on Immunization Practices (ACIP) and the recommendations of the Committee on Infectious Diseases (Red Book Committee) of the American Academy of Pediatrics (AAP). Sometimes these recommendations may vary from those contained in the manufacturer's package inserts. For more detailed information, providers should consult the published recommendations of the ACIP, the AAP, the American Academy of Family Physicians (AAFP), and the manufacturer's package inserts.

Providers administer <u>simultaneously</u> all vaccine doses for which a child is eligible at the time of each visit.

Available evidence suggests that the simultaneous administration of childhood immunizations is safe and effective. In addition, evidence suggests that the simultaneous administration of multiple needed vaccines can potentially raise immunization coverage by 9%-17%. If providers elect not to administer a needed vaccine simultaneously with others (based either on their judgment that this action will not compromise the timely immunization of the child or on a request by the parent or guardian), they should document such actions and the reasons why the vaccine was not administered. The record should be flagged with an automatic recall for an appointment to receive the needed vaccine(s). This next appointment should be discussed with the parent or guardian of the child.

Measles, Mumps, Rubella (MMR) vaccine should always be used in combined form when providing routine childhood immunizations.

Providers use accurate and complete recording procedures.

Providers are required by statute to record, what vaccine was given, the date the vaccine was given (month, day, year), the name of the manufacturer of the vaccine, the lot number, the signature and title of the person who gave the vaccine, and the address where the vaccine was given.[2] In addition, providers should record on the child's personal immunization record card (preferably the official state version) what vaccine was given, the date the vaccine was given and the name of the provider. Providers should encourage parents or guardians to maintain a copy of their child's personal immunization record card. This card should be updated at each visit for immunizations. If a parent fails to bring their child's card, a new one should be issued containing all previous immunizations and designated as a replacement record card. When accepting immunization record data from parents, providers should confirm that prior doses of vaccines have actually been administered, either by reviewing immunization record cards or by contacting former providers and entering this verified information onto their records. When a provider who does not routinely vaccinate or care for a child administers a vaccine to that child, the regular provider should be informed.

Providers with manual record-keeping systems should maintain separate or easily retrievable files of the immunization records of preschoolers to facilitate assessment of coverage as well as the identification and recall of children who miss appointments. In addition, preschooler immunization files should be sorted periodically, with inactive records placed into a separate file. Providers should indicate in their records, or in an appropriately identified place, all primary care services that each child receives in order to facilitate co-scheduling with other services.

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[2] 42 US Code 300aa-25

Providers co-schedule immunization appointments in conjunction with appointments for other child health services.

Providers of immunization-only services which require an appointment should co-schedule immunization appointments with other needed health care services such as WIC, dental exams or developmental screening **provided such scheduling does not create a barrier** by delaying needed immunizations.

Providers report adverse events following immunization promptly, accurately and completely.

Providers should encourage parents or legal guardians to inform them of adverse events following immunization. Providers should report all such clinically significant events, including those required by law, to the Vaccine Adverse Event Reporting System (VAERS), regardless of whether or not they believe the events are caused by the vaccines. Report forms and assistance are available by calling 1-800-822-7967. Providers should document fully the adverse event in the medical record at the time of the event or as soon as possible thereafter.

Providers operate a tracking system.

A tracking system should produce reminders of upcoming immunizations as well as recalls for children who are overdue. A system may be automated or manual and may include mailed or telephone messages. In the public sector, health department staff may also make home visits. All providers should identify, for additional intensive tracking efforts, children considered at high risk of failing to complete the immunization series on schedule (e.g., children who start their series late).

13 Providers adhere to appropriate procedures for vaccine management.

Vaccines should be handled and stored as recommended in the manufacturer's package inserts. The temperatures at which vaccines are stored and transported should be monitored daily and the expiration date for each vaccine should be noted.

Providers using publicly purchased vaccine should periodically report usage, wastage, loss and inventory as required by state or local public health authorities.

14 Providers conduct semi-annual audits to assess immunization coverage levels and to review immunization records in the patient populations they serve.

In both the public and private sector, the assessment of immunization services for pre-school-aged patients should include audits of immunization records or inspection of a random sample of records (1) to determine the immunization coverage level (i.e., the percentage of children that are up-to-date by their second birthday), (2) to identify how frequently opportunities for simultaneous immunization are missed and (3) to assess the quality of documentation. The results of such assessments should be discussed by providers as part of their ongoing quality assurance reviews and used to develop solutions to the problems identified.

Providers maintain up-to-date, easily retrievable medical protocols at all locations where vaccines are administered.

Providers administering vaccines should maintain a protocol which, at a minimum, discusses the appropriate vaccine dosage, vaccine contraindications, the recommended sites and techniques for vaccine administration as well as possible adverse events and their emergency management. Such protocols should specify the necessary emergency medical equipment, drugs (including dosage) and personnel to safely and competently deal with any medical emergency which may arise after the administration of a vaccine. All providers should be familiar with the content of these protocols, their location and how to follow them. Vaccines can be administered in any setting (e.g., schools, churches) where providers can adhere to these protocols.

Providers practice patient-oriented and community-based approaches.

Public providers should routinely seek the input of their patients on specific approaches to better serve their immunization needs and implement the changes necessary to provide more user-friendly services.

Public providers should adopt a community-based approach to the provision of immunization services which calls for reaching high coverage levels in their catchment area populations and not only in the active patient populations they serve. Such a community-based approach requires all public providers to publicize the availability of their immunization services and to conduct community outreach activities to increase demand for immunization services. Private providers should cooperate with local health officials in their efforts to assure high coverage levels throughout the community. Without high immunization coverage levels, no community is completely protected against vaccine-preventable diseases. All providers share in the responsibility to achieve the highest possible degree of community protection.

Vaccines are administered by properly trained individuals.

Only properly trained individuals should administer vaccines. However, the task of administering vaccines need not be assigned exclusively to physicians and nurses. With appropriate training, including the management of emergency situations, and under professional supervision, other personnel can skillfully and safely administer vaccines. In some jurisdictions, statutory requirements may limit the administration of vaccines to licensed physicians and/or nurses which could therefore create barriers to immunization. If so, legal opinion should be sought locally to determine the necessary steps to overcome this barrier.

18 Providers receive ongoing education and training on current immunization recommendations.

Providers include all individuals who are involved in the administration of vaccines, the management of immunization clinics, or the support of these functions. Training and education should cover current guidelines and recommendations of the ACIP, AAP and the AAFP as well as the Standards for Pediatric Immunization Practices and other immunization information sources such as the manufacturer's package inserts. Providers should also receive information about ongoing national efforts to reach the year 2000 goal of 90% series complete immunization by the second birthday.

Contraindications

Guide to Contraindications and Precautions to Immunizations

May 1992

Vaccine	True Contraindications and Precautions	Not True (Vaccines may be given)
GENERAL FOR ALL VACCINES **[DTP/DTaP, OPV, IPV, MMR, Hib, HBV]**	Anaphylactic reaction to a vaccine contraindicates further doses of that vaccine	Mild to moderate local reaction (soreness, redness, swelling) following a dose of an injectable antigen
	Anaphylactic reaction to a vaccine constituent contraindicates the use of vaccines containing that substance	
	Moderate or severe illnesses with or without a fever	Mild acute illness with or without low-grade fever
		Current antimicrobial therapy
		Convalescent phase of illnesses
		Prematurity (same dosage and indications as for normal, full-term infants)
		Recent exposure to an infectious disease
		History of penicillin or other nonspecific allergies or fact that relatives have such allergies

This information is based on the recommendations of the Advisory Committee on Immunization Practices (ACIP) and those of the Committee on Infectious Diseases (Red Book Committee) of the American Academy of Pediatrics (AAP). Sometimes these recommendations vary from those contained in the manufacturers' package inserts. For more detailed information, providers should consult the published recommendations of the ACIP, the AAP, the AAFP, and the manufacturers' package inserts.

Vaccine	True Contraindications and Precautions		Not True (Vaccines may be given)
DTP/DTaP	Encephalopathy within 7 days of administration of previous dose of DTP		Temperature of <40.5°C (105°F) following a previous dose of DTP
	Precautions*	Fever of ≥40.5°C (105°F) within 48 hrs after vaccination with a prior dose of DTP	Family history of convulsions**
		Collapse or shocklike state (hypotonic-hyporesponsive episode) within 48 hrs of receiving a prior dose of DTP	Family history of sudden infant death syndrome
		Seizures within 3 days of receiving a prior dose of DTP (see footnote** regarding management of children with a personal history of seizures at any time)	Family history of an adverse event following DTP administration
		Persistent, inconsolable crying lasting ≥3 hrs, within 48 hrs of receiving a prior dose of DTP	

*The events or conditions listed as precautions, although not contraindications, should be carefully reviewed. The benefits and risks of administering a specific vaccine to an individual under the circumstances should be considered. If the risks are believed to outweigh the benefits, the immunization should be withheld; if the benefits are believed to outweigh the risks (for example, during an outbreak or foreign travel), the immunization should be given. Whether and when to administer DTP to children with proven or suspected underlying neurologic disorders should be decided on an individual basis. It is prudent on theoretical grounds to avoid vaccinating pregnant women. However, if immediate protection against poliomyelitis is needed, OPV, not IPV, is recommended.

**Acetaminophen given prior to administering DTP and thereafter every 4 hours for 24 hours should be considered for children with a personal or with a family history of convulsions in siblings or parents.

Vaccine	True Contraindications and Precautions		Not True (Vaccines may be given)
OPV***	Infection with HIV or a household contact with HIV		Breast feeding
	Known altered immunodeficiency (hematologic and solid tumors; congenital immunodeficiency; and long term immunosuppressive therapy)		Current antimicrobial therapy
	Immunodeficient household contact		Diarrhea
	Precaution*	Pregnancy	
IPV	Anaphylactic reaction to neomycin or streptomycin		
	Precaution*	Pregnancy	

*The events or conditions listed as precautions, although not contraindications, should be carefully reviewed. The benefits and risks of administering a specific vaccine to an individual under the circumstances should be considered. If the risks are believed to outweigh the benefits, the immunization should be withheld; if the benefits are believed to outweigh the risks (for example, during an outbreak or foreign travel), the immunization should be given. Whether and when to administer DTP to children with proven or suspected underlying neurologic disorders should be decided on an individual basis. It is prudent on theoretical grounds to avoid vaccinating pregnant women. However, if immediate protection against poliomyelitis is needed, OPV, not IPV, is recommended.

***There is a theoretical risk that the administration of multiple live virus vaccines (OPV & MMR) within 30 days of one another if not given on the same day will result in a suboptimal immune response. There are no data to substantiate this.

Vaccine	True Contraindications and Precautions		Not True (Vaccines may be given)
MMR***	Anaphylactic reactions to egg ingestion and to neomycin****		Tuberculosis or positive PPD
	Pregnancy		Simultaneous TB skin testing*****
	Known altered immunodeficiency (hematologic and solid tumors; congenital immunodeficiency; and long term immunosuppressive therapy)		Breast feeding
			Pregnancy of mother of recipient
	Precaution*	Recent (within 3 months) IG administration	Immunodeficient family member or household contact
			Infection with HIV
			Nonanaphylatic reactions to eggs or neomycin
Hib			
HBV			Pregnancy

*The events or conditions listed as precautions, although not contraindications, should be carefully reviewed. The benefits and risks of administering a specific vaccine to an individual under the circumstances should be considered. If the risks are believed to outweigh the benefits, the immunization should be withheld; if the benefits are believed to outweigh the risks (for example, during an outbreak or foreign travel), the immunization should be given. Whether and when to administer DTP to children with proven or suspected underlying neurologic disorders should be decided on an individual basis. It is prudent on theoretical grounds to avoid vaccinating pregnant women. However, if immediate protection against poliomyelitis is needed, OPV, not IPV, is recommended.

***There is a theoretical risk that the administration of multiple live virus vaccines (OPV & MMR) within 30 days of one another if not given on the same day will result in a suboptimal immune response. There are no data to substantiate this.

****Persons with a history of anaphylactic reactions following egg ingestion should be vaccinated only with extreme caution. Protocols have been developed for vaccinating such persons and should be consulted (J Pediatr 1983,102:196-9, J Pediatr 1988;113:504-6).

*****Measles vaccination may temporarily suppress tuberculin reactivity. If testing can not be done the day of MMR vaccination, the test should be postponed for 4-6 weeks.

Agency Members

Working Group for the Development of the Standards for Pediatric Immunization Practices

Advisory Committee on Immunization Practices
American Academy of Family Physicians
American Academy of Pediatrics
American College of Emergency Physicians
American Medical Association
American Nurses Association
American Public Health Association
Association of Community Health Nursing Educators
Association of Maternal and Child Health Programs
Association of State and Territorial Directors of Nursing
Association of State and Territorial Health Officials
Centers for Disease Control and Prevention (CDC)
City of Milwaukee Health Department
Council of State and Territorial Epidemiologists
Emergency Nurses Association
Health Care Financing Administration, Medicaid Bureau
Health Resources and Services Administration, Bureau of Health Care Delivery and Assistance, Division of Primary Care Services
Health Resources and Services Administration, Maternal Child Health Bureau
National Association of Community Health Centers
National Association of County Health Officials
National Association of Pediatric Nurse Associates & Practitioners
National Migrant Resource Program
National Vaccine Injury Compensation Program
United States Conference of Local Health Officers

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State and Local Health Departments